

Patent claims:

1. A method for the continuous production of copolyamide and polyamide, the starting material of which consists of the salt of hexamethylenediamine with adipic acid (AH salt) and water and, in the case of copolyamide, additionally of lactam, comprising a first stage of the method, which is carried out under pressure at temperatures between 180 and 280°C, the prepolymer being fed, after passing through the first stage of the method, to at least one further stage of the method, from which the evaporated water is removed and/or is expelled with inert gas, characterized in that the water evaporating in the first stage of the method, with reaction components contained therein, is passed into the at least one further stage of the method and the expulsion of the water is effected only in the further stage or stages of the method.
2. The method as claimed in claim 1, characterized in that the water evaporating in the first stage of the method, with reaction components contained therein, is passed into the at least one further stage of the method, from which the waste product in vapor form is passed via a reflux column outside the limit of the method and/or into the gas space of the next stage of the method.
3. The method as claimed in claim 1, characterized in that an amount of AH-salt of up to 30% or from 80 to 100% is used.

4. The method as claimed in claim 1, characterized in that the expulsion of the water in the reflux column is effected at a temperature, at the upper end of the reflux column, of less than 120°C, and in that caprolactam and diamine fractions separated off in the reflux column are recycled to the at least one further stage of the method.

5. Device for carrying out the method as claimed in any of the preceding claims, comprising a first pressure reactor (2), upstream of which a heat exchanger (1) is connected and downstream of which at least one postcondensation reactor (5) is connected via a melt dryer (4), characterized in that the gas space of the pressure reactor (2) is connected with pressure control to the gas space of the postcondensation reactor (5), and in that water from the gas space of the postcondensation reactor (5) is expelled via a reflux column (8) and a trap (9).

6. The device as claimed in claim 5, characterized in that, in the reflux column (8), the caprolactam and diamine fractions separated off are recycled to the postcondensation reactor (5).

7. The device as claimed in claim 5, characterized in that the separation in the reflux column (8) is effected at a temperature of less than 120°C.